

Natural Resources and Environment

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Introduction

The availability of resources, their utilization and the capacity to mobilize more resources determine an economy's ability to overcome the various problems. Resource profile of the economy concentrates on four broad categories of resources.

Objectives

After reading this unit, you should be able to:

- ❖ State the meaning and significance of natural resources in the process of economic development in India;
- ❖ Comment on the state of natural resources in India as it has emerged out of the growth process during the last sixty years;
- ❖ Analyse the government policy in regard to the use of natural resources; and Environment
- ❖ Explain the concept of sustainable development and the set of policies required to achieve this goal.

Natural, infrastructure, human and financial.

Natural resources, as conventionally understood, include all those objects and products that human labour combined with inputs of capital and enterprise, can extract from nature and make use of them to produce more goods and services. Natural resources are not static in nature; they are dynamic and keep on changing. As the process of economic development gathers momentum, the demand for natural resources increases; it becomes critical that both the urgency and temptation to exploit natural resources to the hilt for the sake of short-term gains are avoided; instead a holistic view is taken, so that the interests of the future generations are not compromised. "Sustainable development" should be the goal.

Knowledge of Natural Resources

Work on mapping and surveys of natural resources has expanded greatly under the Five-Year Plans.

1) The older agencies, such as the Survey of India and the Geological Survey, have been expanded in order to enable them to undertake larger programmes of work.

- 2) The *Indian Bureau of Mines* was established in 1950 to undertake an economic assessment of natural resources and to formulate programmes of development
- 3) A *Soil Land Use Survey* has been established under the Indian Council of Agricultural Research; Systematic soil surveys are being undertaken by it in co-operation with the State Departments of Agriculture. The national laboratories and institutes of scientific research also undertake studies relating to evaluation for utilisation of natural resources.
- 4) The newly-introduced Forest Survey, the state of Forest Report, which is published at intervals, as also remote sensing and satellite imageries through valuable data of immense use to policy makers.

Land and Soils

India measures 3,214 kms. from north to south and 2,933 kms from east to west with a total land area of 32,87,782 sq.kms and a coastline measuring 7516.5 kms, plus 1,197 islands. It is the seventh largest landowner in the world after Russia, Canada, China, the U.S.A., Brazil and Australia in that order. In brief, India is a vast country and has a considerable strategic significance on account of its location, size and economic resources. Standing at the heart of the Indian Ocean, the country is in a much better position than any other in the area to control the Indian Ocean routes, most of which touch the Indian ports. Most of the air routes between Europe, West Asia and Africa and East Asia, South-East Asia and Japan also pass through India. It gives India an advantage in terms of international mobility of persons and commodities.

Soils

Long ago Aristotle described soil as the stomach of the plant. Even now over 90 per cent of the world's food comes from the soil and less than 10 per cent comes from both inland water and the oceans. □ Alluvial soils are suitable for the cultivation of almost all kinds of cereals, pulses, oilseeds, cotton, sugarcane and vegetables. Black soils are known for their fertility. They give good yields despite continued cultivation and without proper manuring. Cotton, cereals, oilseeds and many kinds of vegetables and citrus fruits are some of the crops suited to black soils.

Water Resources

Water is the most important source of energy in the Indian economy. About 25 per cent of electricity generated in the economy is from the hydel sources. The other important use of water is irrigation. In a country where agriculture gives twists and turns to the whole economy, provision of water can make all the difference; it can either stimulate the economic activity or

depress it altogether. The important sources of water can be classified into two parts: (i) surface water, and (ii) ground water. Surface water is available from such sources as rivers, lakes, etc. Ground water is available from wells, springs, etc. Other sources of water which have not as yet been tapped in the country, but nevertheless represent a potential source are: saline springs, snow and ice-fields. Surface water sources are replenished by rainfall.

National Water Policy

The National Water Policy, 2002 was announced on April 1, 2002. Its main features are as follows. (i) Stress on maintenance of irrigation projects; (ii) River Basin organisations to ensure development and management of inter-state river basins; (iii) Calls for dam safety legislation to ensure proper inspection, maintenance and surveillance; (iv) Calls for national policy for resettlement and rehabilitation of project affected people; (v) Ecology given priority in water allocation; minimum flows in perennial streams mandated; (vi) Provides for participatory approach to water management including water users associations, private sector and modern information systems; (vii) Private sector participation should be encouraged in planning, development and management of water resources projects for diverse uses.

Forest Resources

Forests produce the requisite raw materials for industries, defence, communications, domestic use and other public purposes. They contribute to the country's exports and create a large volume of employment in the primary, secondary and tertiary sectors. They also provide materials like fuelwood, small timber, fodder, etc. for direct use by the agriculturists. The benefits from forests in the matter of soil conservation, recreation, wildlife, etc. have been well-recognised. Forests have multifarious uses, some of which can be identified as follows:

- 1) Trees and forests have many uses, and are, therefore, considered as one of the important natural resources of a country. Plants through photosynthesis convert the solar energy into various forms of energy like food, fuel, oil products, raw materials for industries, and other indirect sources of renewable energy, which can be directly used by us. Forests meet nearly 40 per cent of our energy needs.
- 2) The thick foliage-mix, that both trees and shrubs attract, prevents soil erosion, and holds moisture content in both the soil and the atmosphere. These are also described as hydrological benefits of forests.

3) Forests meet the basic needs of the poor people of the country in many ways. Forests provide 30 per cent of our fodder needs.

4) Forests offer good employment opportunities too, mainly to the rural population.

Present Position

Forests occupy about 783.7 lakh hectares or about 23.84 per cent of the geographical area. (Of this dense forest category, i.e., 40 per cent or more of the area covered by trees, amounts to about 58.0 per cent.) Of these about 433 lakh hectares or about 61.0 per cent are exploitable; another 178 lakh hectares or about 25 per cent are potentially exploitable. Among the States, Madhya Pradesh has the maximum forest area of 77,265 sq.km., followed by Arunachal Pradesh (68,045 sq.km.) and Chhattisgarh (56,448 sq. km.).

National Forest Policy

The national forest policy was first enunciated in 1952 and subsequently revised in 1988. In 1952 the policy was formulated on the basis of six paramount needs of the country. (i) Evolving a system of balanced and complementary land use. (ii) Checking the denudation of mountain regions, the erosion of space along the treeless banks of the great rivers leading to ravine formation, and the invasion of sea and coastal tracts. (iii) Establishment of tree lands, wherever possible. (iv) Need for ensuring progressively increasing supplies of grazing fields, small wood for agricultural implements and in particular firewood to release cattle-dung for manure. (v) Need for sustained supply of timber and other forest produce required for defence, communications and industry.

Mineral Resources

The mineral resources of India encompass a wide range of products that are necessary for a modern developed economy. There are, according to the Geological Survey of India, 50 important minerals occur. (Out of total land area of 3.28 million sq. kms, hard rock area covers 2.42 million sq.kms.). These can be divided into four categories as follows:

- 1) Minerals of which India's exportable surplus can dominate the world market; to this category belong iron-ore and mica;
- 2) Minerals of which the exportable surplus forms an important factor; these include manganese ore, bauxite, gypsum and others;
- 3) Minerals in which it appears that the country is self-sufficient, like coal, sodium salts, glass sand, phosphates, bauxite, etc.;

4) Minerals for which India has to depend largely or entirely on foreign markets like copper, nickel, petroleum, lead, zinc, tin, mercury, platinum, graphite, etc.

Features of Minerals

Minerals provide a base for the rapid industrialisation of the economy. It has opened up further avenues for faster industrial growth and greater requirement of minerals “besides the fact that the geological setting of the country holds great promise for a boom in mineral production.” [Expert opinion is that given the size of deposits in South Africa and Australia, large reserves can be expected in India also (because of similar geological structures). A recent Price Waterhouse Report has identified India as the most promising mining location worldwide.]Notwithstanding this, India’s spending on exploration is only about 0.8 per cent of the global spending with private sector only contributing 3 per cent of this. There are a few essential aspects that need to be worked into a proper mineral policy.

National Mineral Policy, 1993

The National Mineral Policy was announced on August 9, 1990, and modified on March 5, 1993.

Biodiversity

India contains a great wealth of biological diversity in its wetlands and in its marine areas. There are about 350 species of mammals, 1,224 species of birds, 408 species of reptiles, 197 species of amphibians, 2,456 species of fishes, and 15,000 flowering plants. The importance of these biological resources cannot be overestimated for the continued welfare of India’s population. A large number of both flora and fauna are faced with threat of extinction because of the increasing demand being made on natural resources. The Government has responded by taking a number of measures including legislative measures, among which the more important is the Biological Diversity Act, 2002.

What is Environment?

Environment has been defined as the aggregate of all the external conditions and influences affecting the life and development of an organism. It comprises the whole range of external influences acting on an organism, of both the physical and the biological forces of nature surrounding the human individual. All living beings are part of balanced and interacting ecosystem: they draw sustenance from the solid, liquid and aerial resources on the earth. They undergo passage through the phases of reproduction, sustenance and extinction. The ultimate

source of energy for the entire ecosystem is the solar energy. The ecosystem consists of subsystems such as sea, forests, water reservoirs, plants, trees, insects, animals in a forest— all of them are inter-connected in a network of devourer-devoured relationship.

Food Security - Food security refers to the availability of food and one's access to it. A household is considered food-secure when its occupants do not live in hunger or fear of starvation. Inadequate food security arises from such factors as soil degradation and erosion, declining productivity of such inputs as fertilisers and HYV seeds, diversion of arable land to non-cultivation, etc.

Global Water Crisis - Water tables are falling in scores of countries (including India, China and the US) due to widespread over-pumping, using powerful diesel and electric pumps. This will eventually lead to water scarcity and reduction in grain harvest.

Energy Security - Energy security is a term for an association between national security and the availability of natural resources for energy consumption.

Environmental Protection in India

India is ranked a disappointing 101st out of 146 countries for which the Environmental Sustainability Index (ESI) was prepared in early 2005.

National Environment Policy 2006, (NEP)

The NEP 2006 is being described as a statement of India's commitment to making a positive contribution to international efforts. The NEP builds on the earlier policies, like the National Forest Policy, 1988, National Conservation Strategy and Policy Statement on Environment, 1992, National Agricultural Policy, 2000, National Population Policy, 2000, and National Water Policy, 2002.

References Books

- 1) Dhingra Ishwar C. (2012): *The Indian Economy: Environment and Policy*, Sultan Chand, New Delhi.
- 2) Chopra Kanchan and Swaminathan M.S. (eds.) (2008): *Growth Equity, and Policy*, Sage, New Delhi.
- 3) Krishna K.L. and Kapila Uma (eds.) (2009): *Readings in Indian Agriculture and Industry*, Academic, New Delhi..
- 4) Government of India: state of Environment Report.79

- 5) NIRD (1995) 'Panchayati Raj Institutions in Select States- An Analytical Study'. National Institute of Rural Development, Hyderabad. 1995.
- 6) Samanta B. B. (1997) 'Role of UNICEF in Transfer of Technology: A Case Study of Indian Rural Water Supply and Sanitation Programme'. Faculty of Commerce, Berhampur University, Berhampur. 1997.